
**CHAPTER 1:
PROJECT BACKGROUND AND
PURPOSE AND NEED FOR THE
PROPOSED ACTION**

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Chapter One:

PROJECT BACKGROUND AND PURPOSE AND NEED FOR THE PROPOSED ACTION

1.1 Introduction

The Federal Aviation Administration (FAA) has prepared this Final Environmental Assessment (EA) to identify the potential environmental effects associated with an FAA Proposed Action to implement a new air traffic control Area Navigation (RNAV) departure procedure on Runway 33 Left (33L) at Boston-Logan International Airport (Logan Airport or BOS). A procedure is a predefined set of guidance instructions that define a route for a pilot to follow.

Federal actions, such as the Proposed Action RNAV departure procedure, with the potential to cause environmental impacts must be examined to comply with the National Environmental Policy Act of 1969 (NEPA) and other pertinent laws. Guidance for considering environmental impacts is found in FAA Order 1050.1E, “*Environmental Impacts: Policies and Procedures*” and in the Council on Environmental Quality (CEQ) regulations for implementing NEPA.¹

This Final EA has been prepared in accordance with FAA Order 1050.1E, which requires an EA for new instrument departure procedures which routinely route aircraft over noise sensitive areas at less than 3,000’ above ground level (AGL).²

Although the FAA considered categorically excluding this procedure from the preparation of an EA per FAA Order 1050.1E, as it was designed to overlay conventional (i.e. existing) flight tracks, it chose not to because the procedure is not an exact overlay of conventional flight tracks due to RNAV design criteria. Also, preliminary noise analysis of the RNAV standard instrument departure (SID) procedure on Runway 33L conducted prior to the Draft EA resulted in 145 people being added to the 65 Day-Night Average Sound Level (DNL) noise contour. The results of this preliminary analysis indicated the possibility that the population exposed to higher noise levels could increase with an updated EA noise analysis, and could have the potential to be highly controversial on environmental grounds. As a result, the FAA determined an EA would be appropriate to investigate this in more detail.

In addition, because preliminary noise analysis results for the Proposed Action indicated that environmental impacts would not likely be significant and an EA analysis should be commensurate with the level of impact, this EA is being prepared under the principles of a “Focused EA”.³ A Focused EA addresses only the applicable impact categories from those listed in Appendix A of FAA Order 1050.1E and simplifies what

could otherwise be an unnecessarily complicated process and lengthy document. This Final EA was prepared following public coordination and comments received on the Draft EA published on January 14th, 2013.

The format of this EA is as follows: **Chapter One** provides information on the project background, provides a summary of previous RNAV SID procedure designs and describes the purpose and need for the Proposed Action. **Chapter Two** presents the alternatives for the Proposed Action. **Chapters Three and Four** provide full disclosure of existing conditions and potential environmental impacts, respectively, associated with implementation of the Proposed Action. **Chapter Five** provides a summary of public and agency involvement and **Chapter Six** lists the EA preparers. **Appendix A** provides a summary of operational data used to model the 2009 and 2015 operating environment, and **Appendix B** provides information pertaining to agency consultation and public comment as part of the EA process.

1.2 Study Area

A study area is defined as the geographic area potentially environmentally impacted by a proposed action. According to FAA Order 1050.1E, the altitude ceiling for environmental consideration regarding airspace actions is 10,000' AGL.⁴ The Study Area encompasses roughly a 20 nautical mile (NM) radius around Logan Airport, generally corresponding to BOS Class B airspace and including an altitude up to 14,000' mean sea level (MSL). The 1,500 square mile Study Area and altitude ceiling is consistent with the study area used for the on-going noise study at Logan Airport described in more detail below.

Figure 1-1 depicts the layout of Logan Airport, including runways. **Figure 1-2** illustrates the Study Area for this project.

1.3 Background

The Federal Aviation Act of 1958 delegates to the FAA responsibility for managing the use of the navigable airspace and regulating civil and military aircraft operations in that airspace in the interest of maintaining both the safety and efficiency of operations.

Since 2002, the FAA has been involved in a comprehensive noise abatement study at Logan Airport in collaboration with the Massachusetts Port Authority (Massport) and the Logan Airport Community Advisory Committee (CAC).⁵ The noise study is the result of a mitigation requirement contained in an FAA Record of Decision (ROD) dated August 2002. The ROD was the result of an FAA Environmental Impact Statement (EIS) that evaluated the environmental impacts associated with proposed airside improvements at Logan Airport, which included the new Runway 14/32.⁶

The noise study is being conducted in phases. The first phase was called the Boston Overflight Noise Study (BONS). It was renamed the Boston Logan Airport Noise Study (BLANS) when Phase 2 began in 2007 and consideration of ground noise mitigation was incorporated. At the end of Phase 1, the FAA began implementation of seven noise abatement arrival and departure procedures recommended by the CAC after detailed noise and operational analyses were completed. These procedures are described in a Categorical Exclusion/ROD dated October 16th, 2007. As of November 18th, 2010, all of the noise abatement procedures were implemented at Logan Airport, which includes arrival

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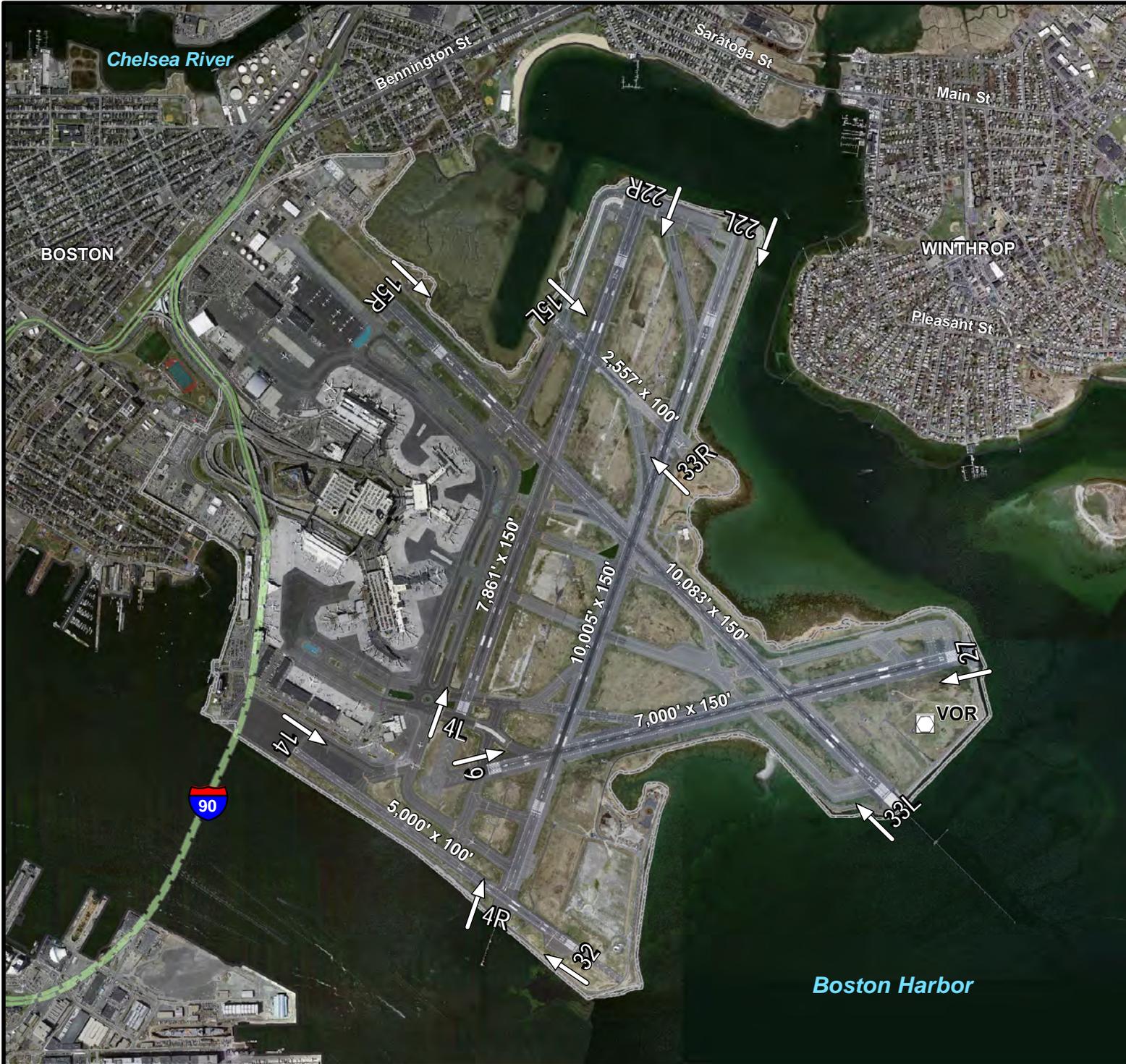


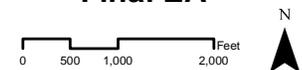
Figure 1-1
Boston Logan International
Airport Layout and
Runway Configuration

LEGEND

-  Airport Boundary
-  Major Highway
-  Major Road
-  BOS VOR/DME



Boston Logan
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Runway 33L RNAV SID
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Source: 2008 Aerial Photography, Office of Geographic Information (MassGIS), ESRI

Boston Logan International Airport



**Figure 1-2
Study Area**

LEGEND

-  Study Area
-  Community within Study Area
-  County Boundary
-  Interstate
-  Highway



**Boston Logan
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Runway 33L RNAV SID
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Source: Office of Geographic Information (MassGIS), ESRI

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procedures to Runways 27, 22, 33L, and departure procedures for Runways 4R, 9, 15R and 22L/R.

The evaluation of a departure procedure for Runway 33L was reserved for Phase 2, along with other potential procedures. FAA, Massport and the CAC analyzed several procedure designs for Runway 33L, but they were either not operationally feasible or did not reduce noise consistent with the goals and objectives of the BLANS. This chapter includes a brief summary of the various measures evaluated in the BLANS, the reasons they were eliminated in that study and how, in part, those measures helped determine FAA's Proposed Action for this EA. Additional information pertaining to each of the measures is available through the BLANS Levels 1, 2, and 3 Screening Analysis reports, available at www.bostonoverflightnoisestudy.com.

In April 2012, the CAC formally recommended that FAA implement a BLANS RNAV departure procedure for Runway 33L. In a letter to the CAC dated August 3rd, 2012, the FAA declined to implement the requested procedure under the umbrella of the BLANS, stating it was inconsistent with the BLANS goals and objectives. The RNAV departure procedure the CAC recommended resulted in over 20,000 people with reportable noise increases using FAA criteria and over 12,000 people would have been added to noise levels above 55 DNL based on CAC criteria. BLANS goals and objectives required a reduction in the number of people exposed to increases in noise levels. However, the FAA stated its intent to establish an RNAV SID procedure for Runway 33L in the near future, consistent

with FAA's Next Generation Air Transportation System (NextGen) goals. Detailed information is contained in the BLANS Level 3 Report.

1.3.1 Next Generation Air Transportation System (NextGen)

NextGen is the FAA's plan to modernize the National Airspace System (NAS) through 2025. Through NextGen, the FAA is addressing the impact of air traffic growth by increasing NAS capacity and efficiency while simultaneously improving safety, reducing environmental impacts, and increasing user access to the NAS. Part of FAA's effort to achieve NextGen goals is to implement new Performance-Based Navigation (PBN) procedures such as RNAV, at airports across the country including Logan Airport. In basic terms, NextGen represents an evolution from an air traffic control system that is primarily ground-based to an air traffic management system that is satellite-based. **Figure 1-3** presents a comparison of the flight trajectory of an aircraft flying a conventional and RNAV procedure.

An RNAV procedure enables aircraft to fly on any desired flight path within the coverage of ground or space based navigation aids, or within the limits of the capability of aircraft self-contained systems, or a combination of both capabilities. RNAV procedures facilitate more efficient design of airspace and procedures which collectively result in improved safety, access, capacity, predictability, operational efficiency and environmental benefits.

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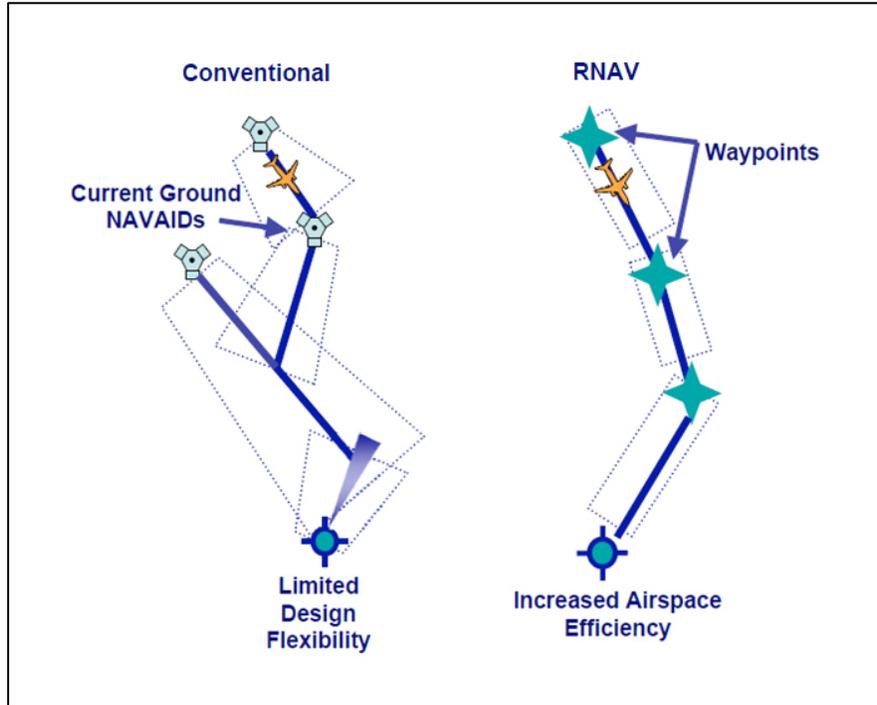


Figure 1-3. Conventional versus RNAV Routes

RNAV procedures are designed in accordance with FAA national design criteria using a software program called Terminal Area Route Generation Evaluation Traffic Simulator (TARGETS). Procedures consist of waypoints in space defined by latitude and longitude. Waypoints are connected by various types of flight path legs, which together form a procedure that defines a route for a pilot to follow.

The implementation of RNAV procedures is usually initiated by FAA air traffic control facility teams for operational reasons. Input is received from the airline industry with oversight and review and approval of final designs from various other FAA offices. Aircraft must be equipped and the crew properly trained to be able to take advantage of an RNAV procedure. At Logan Airport, it is estimated that over 80% of the overall forecast fleet in 2015 will be equipped and able to fly RNAV procedures.

Although the purpose of BONS was to implement procedures that reduced noise (not limited to use of RNAV procedures), RNAV procedures developed by the FAA were found to more accurately accomplish this. Currently, RNAV SID noise abatement departure procedures for jets are in use for Runways 4R, 9, 15R, 22L/R and 27. The only major runway at Logan Airport that does not have an RNAV SID is Runway 33L.

Previous versions of the RNAV SID procedures from Runway 33L did not reduce noise consistent with the overall purpose and goals of the BLANS and could not be implemented under the umbrella of the BLANS. As a result, the FAA is now pursuing an RNAV SID for Runway 33L for operational purposes independent of the BLANS Phase 2.⁷

1.3.2 History of BLANS RNAV SIDs Considered for Runway 33L

Several iterations of an RNAV SID for Runway 33L were considered in the BLANS, designated as different versions of Measure F-HH. Each was evaluated on the basis of safety, controller workload, delay, efficiency and flexibility changes, and capacity. Ultimately, each was eliminated because the measure resulted in a significant compromise on FAA goals and mission based on these criteria, or they were inconsistent with BLANS goals and objectives. The following sections summarize this evolutionary process; however, these measures are not considered alternatives under NEPA for the current Proposed Action.

In general, each iteration of the RNAV SID procedure differed based on the distance the aircraft would fly runway heading prior to turning to the northwest (within 2 NM of the runway end) and where the aircraft would begin to turn towards the “exit fix” within the A90 airspace (in varying locations in Medford). Some of these differences resulted from changes in RNAV design criteria, which guide various criteria such as an aircraft turning radius or climb gradient and ensures that various aircraft types can fly a specific procedure.

1.3.2.1 BLANS Measure F-HH(v1) (2008 - 2009)

BLANS Measure F-HH(v1) instructed turbojet aircraft departing Runway 33L to a course that would route the aircraft over the Wellington Station until reaching a point seven NM beyond the fly over end of the runway or to an altitude of 5,000’ MSL before turning to enroute or intermediate courses. Measure F-HH(v1) is depicted in **Figure 1-4**. The figure (and all subsequent

figures in this section) includes a sample of 2012 jet and turboprop aircraft departures from Runway 33L for comparison with the procedure design, provided via TARGETS.

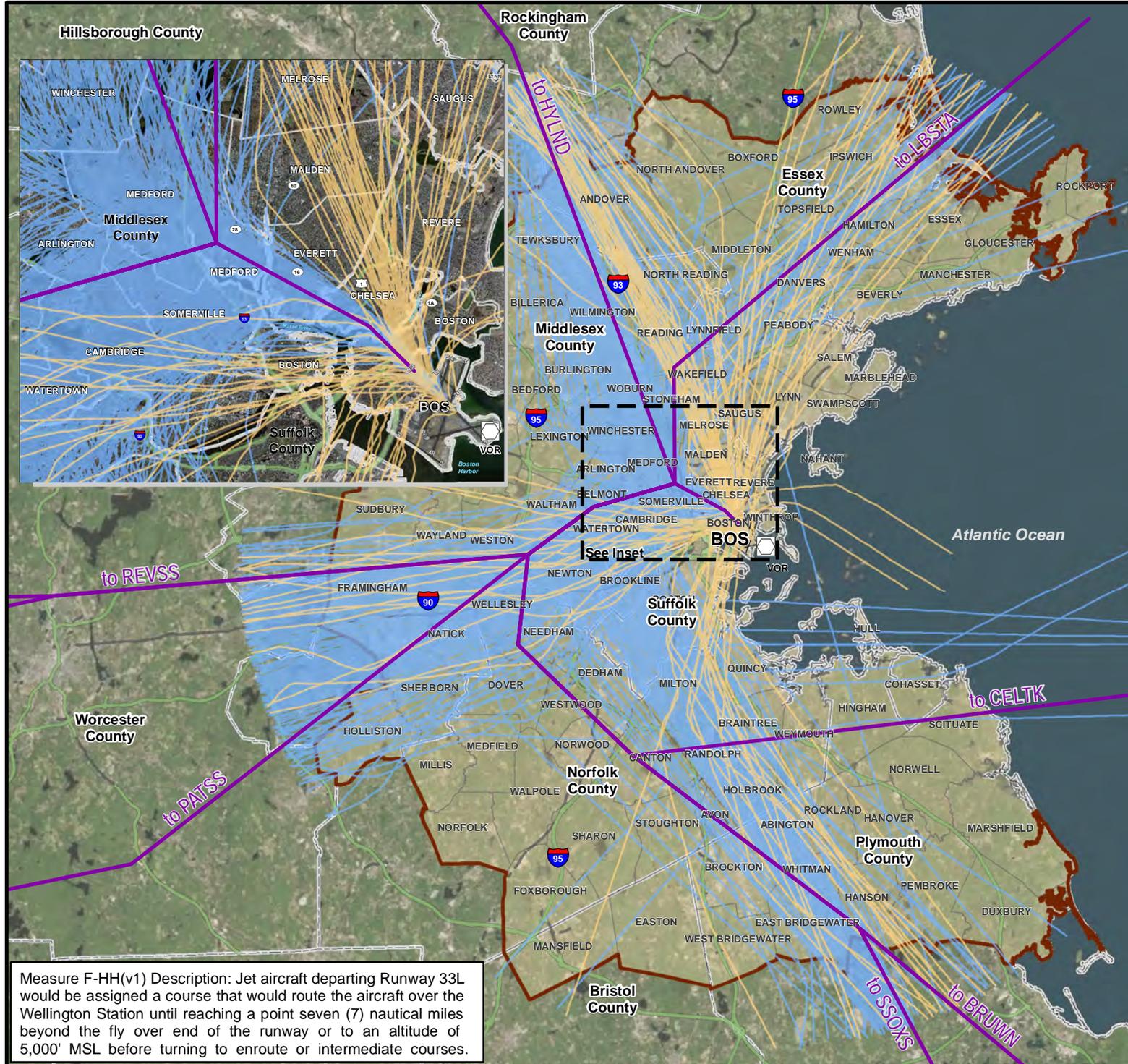
The FAA noted significant safety concerns associated with maintaining adequate separation between Runway 33L departing aircraft and arriving aircraft to Logan Airport, as well as conflicting operations between Logan Airport and nearby airports, including Hanscom-Bedford Airport (BED). As a result of this and other considerations, this measure was not further evaluated as part of the BLANS.

1.3.2.2 BLANS Measure F-HH(v2) (2010)

The FAA proposed modifications to Measure F-HH(v1). Measure F-HH(v2) would establish an RNAV departure route from Runway 33L that would follow compatible land use to the maximum extent practical (e.g. Mystic River and industrial areas toward Wellington Station) up to the BOS very high frequency (VHF) Omni-directional Range (VOR) 5 Distance Measuring Equipment (DME), or at an altitude of 5,000’. Measure F-HH(v2) is shown in **Figure 1-5**. Under the BLANS, the CAC concurred with evaluating F-HH(v2) proposed by the FAA in lieu of Measure F-HH(v1).

The FAA identified that the measure would require a steeper (or non-standard) climb gradient to be feasible, which would require additional runway takeoff length. Because adequate runway length on Runway 33L was not available, aircraft would be required to either reduce overall aircraft weight or use Runway 4R/22L. As a result, this measure was not further evaluated as part of the BLANS.

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Measure F-HH(v1) Description: Jet aircraft departing Runway 33L would be assigned a course that would route the aircraft over the Wellington Station until reaching a point seven (7) nautical miles beyond the fly over end of the runway or to an altitude of 5,000' MSL before turning to enroute or intermediate courses.

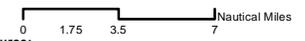
Figure 1-4
Runway 33L RNAV SID
Procedure BLANS
Measure F-HH(v1)

LEGEND

-  Runway 33L RNAV SID Procedure BLANS Measure F-HH(v1) (Procedure Tracks)
-  Existing (LOGAN SIX) Runway 33L Prop Departures
-  Existing (LOGAN SIX) Runway 33L Jet Departures
-  BOS VOR/DME
-  Study Area
-  Community within Study Area
-  County Boundary
-  Interstate
-  Highway



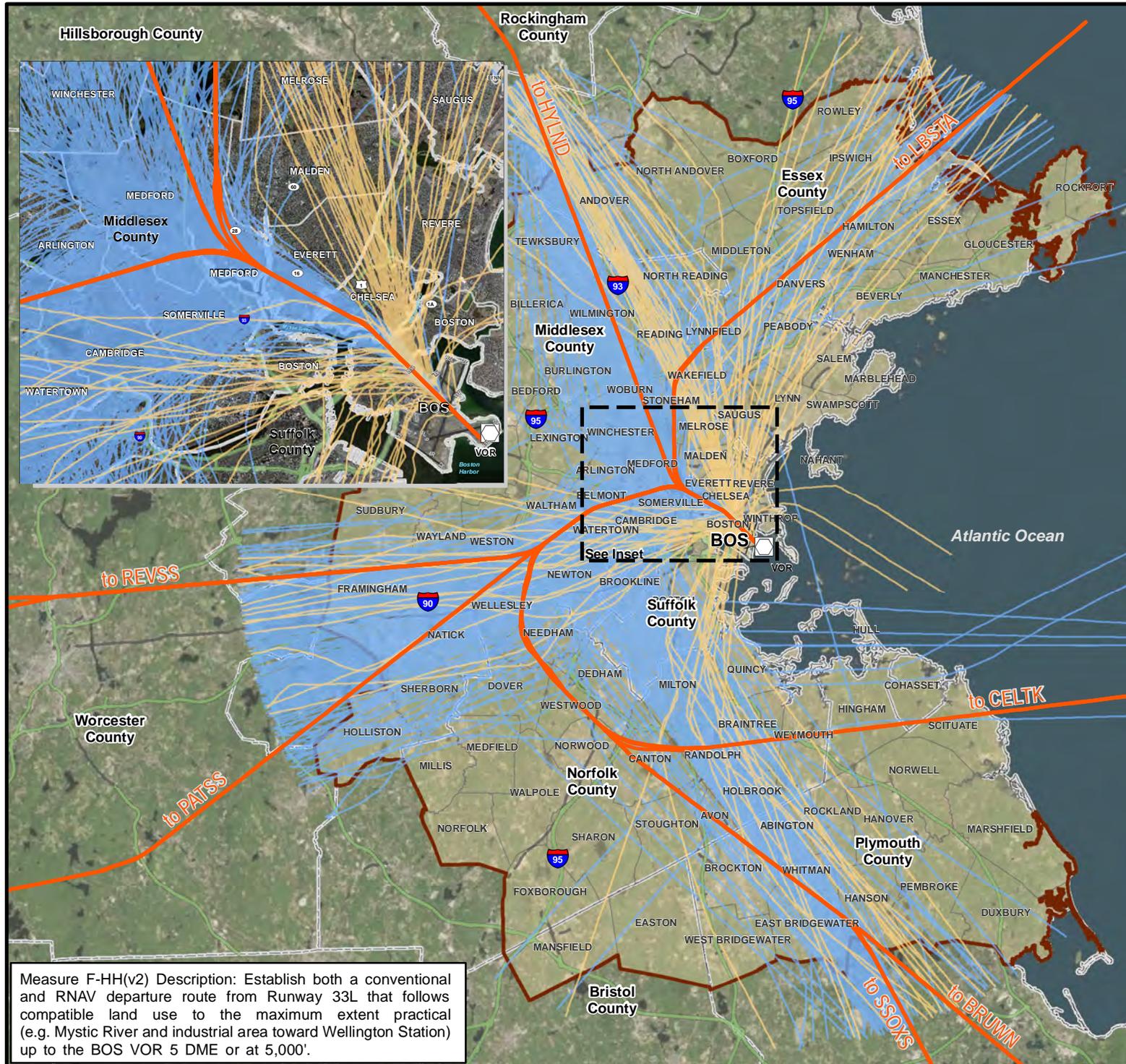
Boston Logan International Airport
Runway 33L RNAV SID
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Source:
 Radar Data: FAA PDARS (3/26/12, 3/30/12, 4/27/12, 4/30/12, 12/11/12, 12/12/12)
 RNAV: TARGETS (FAA PBN Integration Office)
 Office of Geographic Information (MassGIS), ESRI



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Measure F-HH(v2) Description: Establish both a conventional and RNAV departure route from Runway 33L that follows compatible land use to the maximum extent practical (e.g. Mystic River and industrial area toward Wellington Station) up to the BOS VOR 5 DME or at 5,000'.

Figure 1-5
Runway 33L RNAV SID
Procedure BLANS
Measure F-HH(v2)

- LEGEND**
-  Runway 33L RNAV SID Procedure BLANS Measure F-HH(v2)
 -  Existing (LOGAN SIX) Runway 33L Prop Departures
 -  Existing (LOGAN SIX) Runway 33L Jet Departures
 -  BOS VOR/DME
 -  Study Area
 -  Community within Study Area
 -  County Boundary
 -  Interstate
 -  Highway



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0 1.75 3.5 7 Nautical Miles

Source:
 Radar Data: FAA PDARS (3/26/12, 3/30/12, 4/27/12, 4/30/12, 12/11/12, 12/12/12)
 RNAV: TARGETS (FAA PBN Integration Office)
 Office of Geographic Information (MassGIS), ESRI

1.3.2.3 BLANS Measure F-HH(v3) (2011)

Following the dismissal of Measure F-HH(v2), the CAC and FAA developed a revised proposal, addressing the climb gradient and maximizing the overflight of compatible land use corridors. The same heading parameters from Runway 33L that were applied for Measure F-HH(v2) were also applied to Measure F-HH(v3) as well as the general location/distance where the transition to departure fix turns would take place. Measure F-HH(v3) would establish an RNAV SID procedure from Runway 33L that turned to the northwest at a location that avoided Admiral's Hill in Chelsea, then followed compatible land use northwest from Admiral's Hill, and followed compatible land use to the maximum extent practical up to the BOS VOR 5 DME or at a point the aircraft reached an altitude of 5,000'. Measure F-HH(v3) is shown in **Figure 1-6**.

Measure F-HH(v3) was evaluated for noise impacts under the BLANS Level 3 process. The analysis of aircraft noise impacts included multiple criteria. Criteria which guided FAA decision making was related to the overall change in the DNL metric at various thresholds, consistent with the methodology used in this EA. CAC criteria included changes in DNL at lower thresholds than those required to be used by the FAA. Noise analysis in the BLANS was based on Census data published in 2000. The baseline 2015 65 DNL noise contour included 2,343 persons. With the implementation of Measure F-HH(v3), an additional 145 persons would be exposed to noise levels above 65 DNL. Further, over 30,000 persons would experience an increase of at least 5 DNL and would be newly exposed to noise levels above 45 DNL, while 16,045 persons would

experience a 5 DNL decrease in noise, a net increase of 14,325 persons.

Due to the level of noise impacts, the CAC opted to request further revisions to the procedure. This measure was ultimately rejected by the CAC in favor of Measure F-HH(v4).

1.3.2.4 BLANS Measure F-HH(v4) (2012)

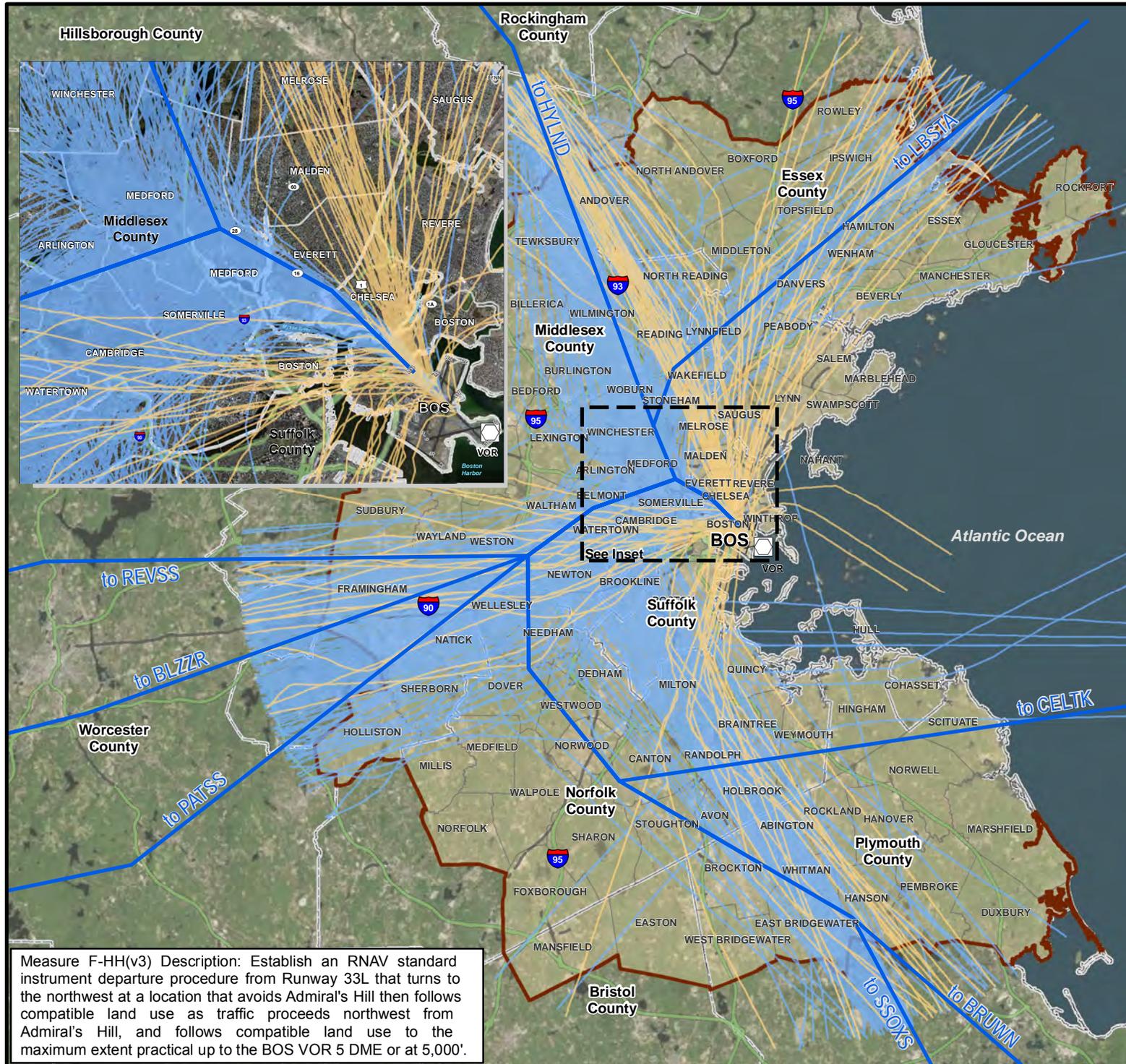
The CAC requested that a revised RNAV SID procedure fly runway heading to a point identical to that in the Measure F-HH(v3) design, then turn to the northwest towards a waypoint located more to the southwest. Measure F-HH(v4) is shown in **Figure 1-7**.

Measure F-HH(v4) was evaluated for its cumulative noise impacts. Like Measure F-HH(v3), an additional 145 persons would be exposed to noise levels above 65 DNL under Measure F-HH(v4). Further, nearly 31,000 persons would experience an increase of at least 5 DNL and would be newly exposed to noise levels above 45 DNL, while 8,461 persons would experience a 5 DNL decrease in noise, a net increase of 22,497 persons.

The CAC voted to implement Measure F-HH(v4) based on their understanding that the FAA was under direction to establish an RNAV SID from Runway 33L. The CAC determined Measure F-HH(v4) was preferable compared to the baseline or Measure F-HH(v3). However, the FAA rejected implementation of the measure because it was inconsistent with the overall purpose and goals of the BLANS. The FAA stated its plan to establish an RNAV SID procedure for Runway 33L in the near future as part of FAA's NextGen program.⁸

Although the BLANS measures were evaluated under a separate study with noise

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Measure F-HH(v3) Description: Establish an RNAV standard instrument departure procedure from Runway 33L that turns to the northwest at a location that avoids Admiral's Hill then follows compatible land use as traffic proceeds northwest from Admiral's Hill, and follows compatible land use to the maximum extent practical up to the BOS VOR 5 DME or at 5,000'.

Figure 1-6
Runway 33L RNAV SID
Procedure BLANS
Measure F-HH(v3)

LEGEND

-  Runway 33L RNAV SID Procedure BLANS Measure F-HH(v3)
-  Existing (LOGAN SIX) Runway 33L Prop Departures
-  Existing (LOGAN SIX) Runway 33L Jet Departures
-  BOS VOR/DME
-  Study Area
-  Community within Study Area
-  County Boundary
-  Interstate
-  Highway



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0 1.75 3.5 7 Nautical Miles

Source:
 Radar Data: FAA PDARS (3/26/12, 3/30/12, 4/27/12, 4/30/12, 12/11/12, 12/12/12)
 RNAV: TARGETS (FAA PBN Integration Office)
 Office of Geographic Information (MassGIS), ESRI

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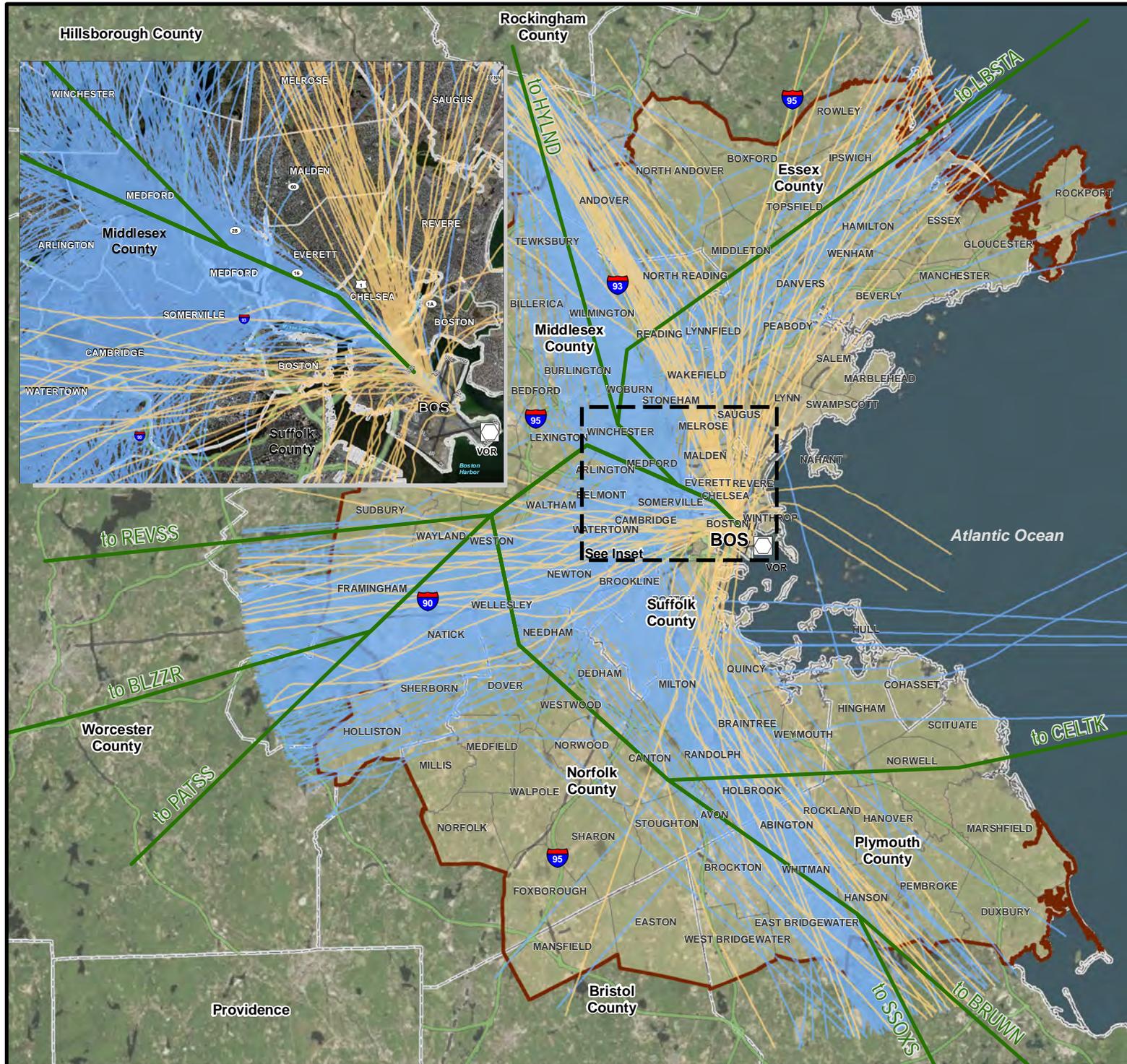


Figure 1-7
Runway 33L RNAV SID
Procedure BLANS
Measure F-HH(v4)

LEGEND

-  Runway 33L RNAV SID Procedure BLANS Measure F-HH(v4)
-  Existing (LOGAN SIX) Runway 33L Prop Departures
-  Existing (LOGAN SIX) Runway 33L Jet Departures
-  BOS VOR/DME
-  Study Area
-  Community within Study Area
-  County Boundary
-  Interstate
-  Highway



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Source:
 Radar Data: FAA PDARS (3/26/12, 3/30/12, 4/27/12, 4/30/12, 12/11/12, 12/12/12)
 RNAV: TARGETS (FAA PBN Integration Office)
 Office of Geographic Information (MassGIS), ESRI



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abatement goals instead of operational goals, the FAA considered the information learned from the various design iterations described above and CAC's interest in minimizing noise to the underlying communities. As a result, the FAA determined that overlaying the existing LOGAN SIX conventional procedure for jet aircraft as closely as RNAV design criteria allows would address FAA's operational needs. In addition, based on preliminary noise modeling using 2000 census data, this procedure would address the CAC's noise concerns as well.

1.4 Proposed Action

The Proposed Action evaluated in this EA is the implementation of a new RNAV SID procedure from Runway 33L at Logan Airport. The RNAV procedure would be used by RNAV-capable jet aircraft.

The Proposed Action (an RNAV SID from Runway 33L) will instruct jet aircraft to takeoff from Runway 33L, climb on a heading of 331 degrees to at or above 520', (aircraft will remain on a 331-degree heading and will continue to climb to published altitudes or as assigned by ATC), then intercept a 314-degree course to the TEKKK waypoint (TEKKK waypoint is 5.88 NM from the BOS VOR and 4.25 NM from the end of the runway). Aircraft then diverge to various departure exit fixes (HYLND, PATSS, LBSTA, CELTK, BRUWN, SSOXS, BLZZR and REVSS).

The exit fixes are positioned at the edges of Boston Approach Control (TRACON) airspace to accommodate existing routings out of the Boston area. They also represent the name of the RNAV SID procedures, regardless of the departing runway. For example, if an aircraft is departing Runway 4R, 9, 15R or 22L/R heading northeast, the

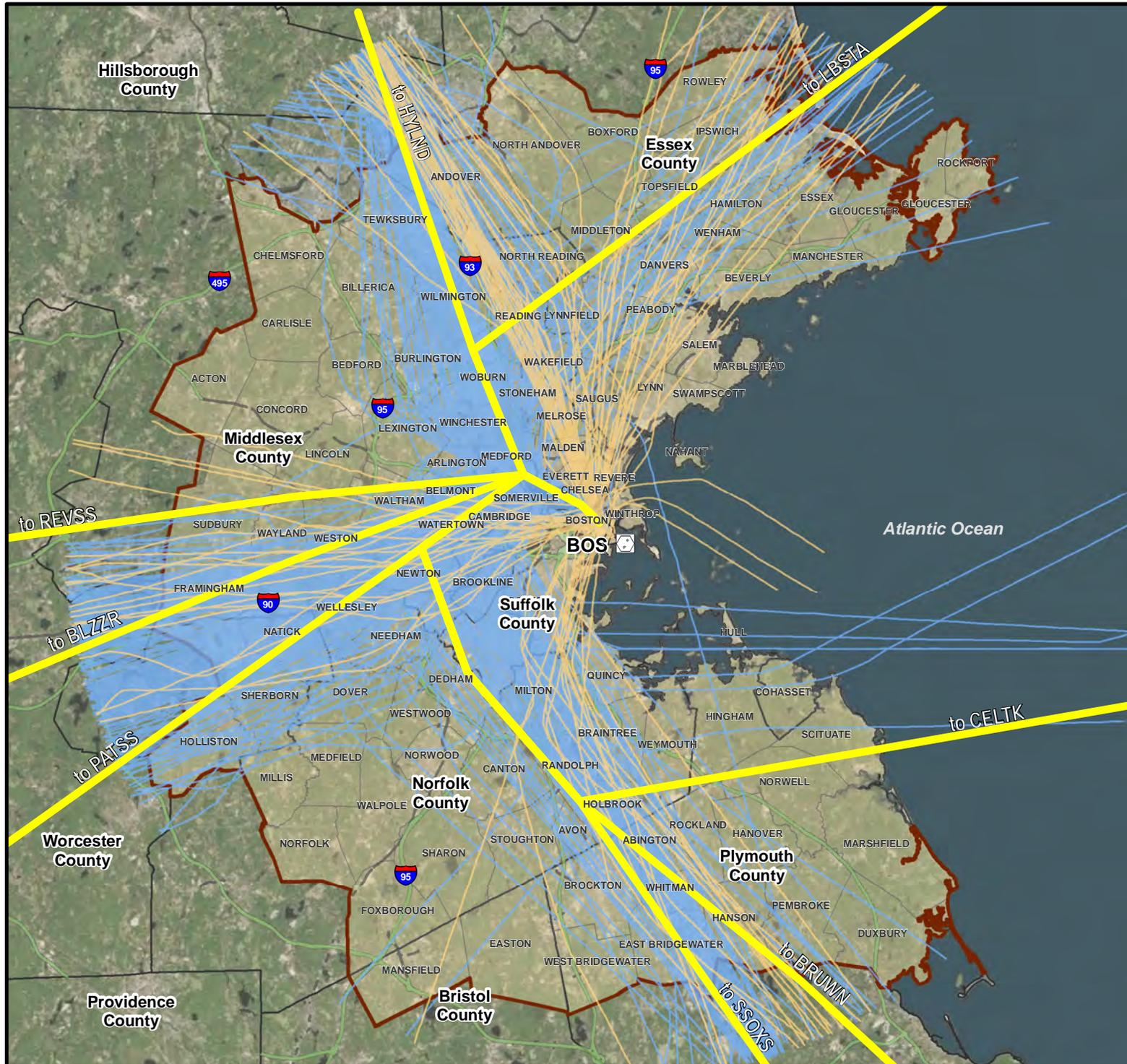
pilot will request the LBSTA RNAV SID procedure. Implementation of an RNAV SID for Runway 33L means modifying the existing RNAV SIDs (HYLND, LBSTA, CELTK, BRUWN, SSOXS, PATSS, BLZZR and REVSS) to include Runway 33L as described above.

The Proposed Action will overlay as closely as possible (given existing RNAV design criteria) the Runway 33L conventional vector procedure (LOGAN SIX) until the first turn point at TEKKK, then transitions to join the RNAV routes from the other BOS runways. The RNAV design criteria which requires that no turns commence before one mile off the departure end of the runway is the only slight variation from the design of the LOGAN SIX, which allows aircraft to begin to turn at approximately 1/2 mile from the runway end. The Runway 33L RNAV SID is designed to remain within the historical jet tracks that depart Runway 33L.

The LOGAN SIX is presently in use and will remain in use for non-RNAV capable jet aircraft and turboprop aircraft. Jet aircraft that depart Runway 33L on the LOGAN SIX, climb via a 331-degree heading until reaching a point 2 NM from the BOS VOR/DME, then turn to a heading of 316 degrees. After reaching 3,000' or 5 NM from the BOS VOR/DME, ATC provides instructions (via radar vector) to the pilot. Aircraft then diverge to various departure exit fixes (HYLND, PATSS, LBSTA, CELTK, BRUWN, SSOXS, BLZZR and REVSS). Turboprop aircraft departing Runway 33L fly an assigned heading upon departure and remain at a lower altitude, following ATC instructions.

Figure 1-8 depicts the Proposed Action RNAV SID design and conventional

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**Figure 1-8
Proposed Action
Alternative -
Runway 33L
RNAV SID Procedure**

LEGEND

-  Runway 33L RNAV SID Procedure
-  Existing (LOGAN SIX) Runway 33L Prop Departures
-  Existing (LOGAN SIX) Runway 33L Jet Departures
-  BOS VOR/DME
-  Study Area
-  Community within Study Area
-  County Boundary
-  Interstate
-  Highway

Note: Procedure applies to RNAV-capable Jet aircraft. Turboprop and non-RNAV capable aircraft use LOGAN SIX Conventional SID.



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Source: Radar Data: FAA PDARS (3/26/12, 3/30/12, 4/27/12, 4/30/12, 12/11/12, 12/12/12)
RNAV: TARGETS (FAA PBN Integration Office)
Office of Geographic Information (MassGIS), ESRI

0 1 2 4 Nautical Miles



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departure flight tracks representing the LOGAN SIX departure procedure.

The Runway 33L RNAV SID does not require new airport infrastructure, increase airport operations or change runway use.

1.4.1 Visual Comparison of BLANS Measures and Proposed Action

Figure 1-9 provides a visual comparison of the previous BLANS measures and Proposed Action Alternative. The BLANS measures assumed a 6 NM corridor after the initial turn point (i.e. TEKKK). FAA could not commit to a specific route at these higher altitudes until after the RNAV design had been evaluated for separation issues with other traffic as part of the 18-step RNAV process. This is documented in the BLANS Level 3 Report. The No Action and the Proposed Action Alternatives are carried forward for additional environmental review. See Chapter 4, *Environmental Consequences* for details on environmental considerations.

1.5 Purpose and Need

The FAA’s continuing mission is to provide the safest, most efficient aerospace system in the world. The purpose of the Proposed Action is to increase the efficiency of ATC procedures at Logan Airport and in Boston TRACON’s adjoining/ overlying airspace by using NextGen technology – defined procedures instead of less efficient ground-based and/or radar vector procedures.

As previously stated, RNAV procedures facilitate more efficient design of airspace and procedures which collectively result in improved safety, access, capacity, predictability, operational efficiency, reduced pilot and controller voice communications and environmental

benefits, including reduced carbon dioxide emissions, reduced fuel use, and improved ability to address noise.

Currently, Runway 33L is the only major runway at Logan Airport that does not have an RNAV SID. Establishing an RNAV SID will provide the pilots and controllers with a predictable procedure that will automatically guide the aircraft to the previously established exit fixes that transition aircraft departing Runways 4R, 9, 15R, 22 L/R and 27 from Boston TRACON’s airspace (up to 14,000’ MSL) to the adjoining overlying airspace controlled by the Boston Air Route Traffic Control Center (Boston Center).

This procedure will simplify Logan Airport departure procedures by allowing aircraft to depart any runway on the same departure procedure. It will enhance safety by eliminating the potential for flight deck confusion and subsequent radio frequency congestion, experienced between air traffic controllers and pilots as a result of changing departure procedures depending on the runway in use.

1.6 Implementation

The FAA originally anticipated implementing the Proposed Action on March 7th, 2013, with the update of the other BOS RNAV SIDs. This assumed a completed EA process. Due to a 30-day extension of the comment period for the Draft EA and the need to address numerous public comments, the Runway 33L RNAV SID was not implemented on March 7th, 2013. Implementation of the Proposed Action will be preceded by controllers from both Boston Tower and Boston TRACON undergoing training on the new procedure. Additionally, the existing Boston Tower and Boston

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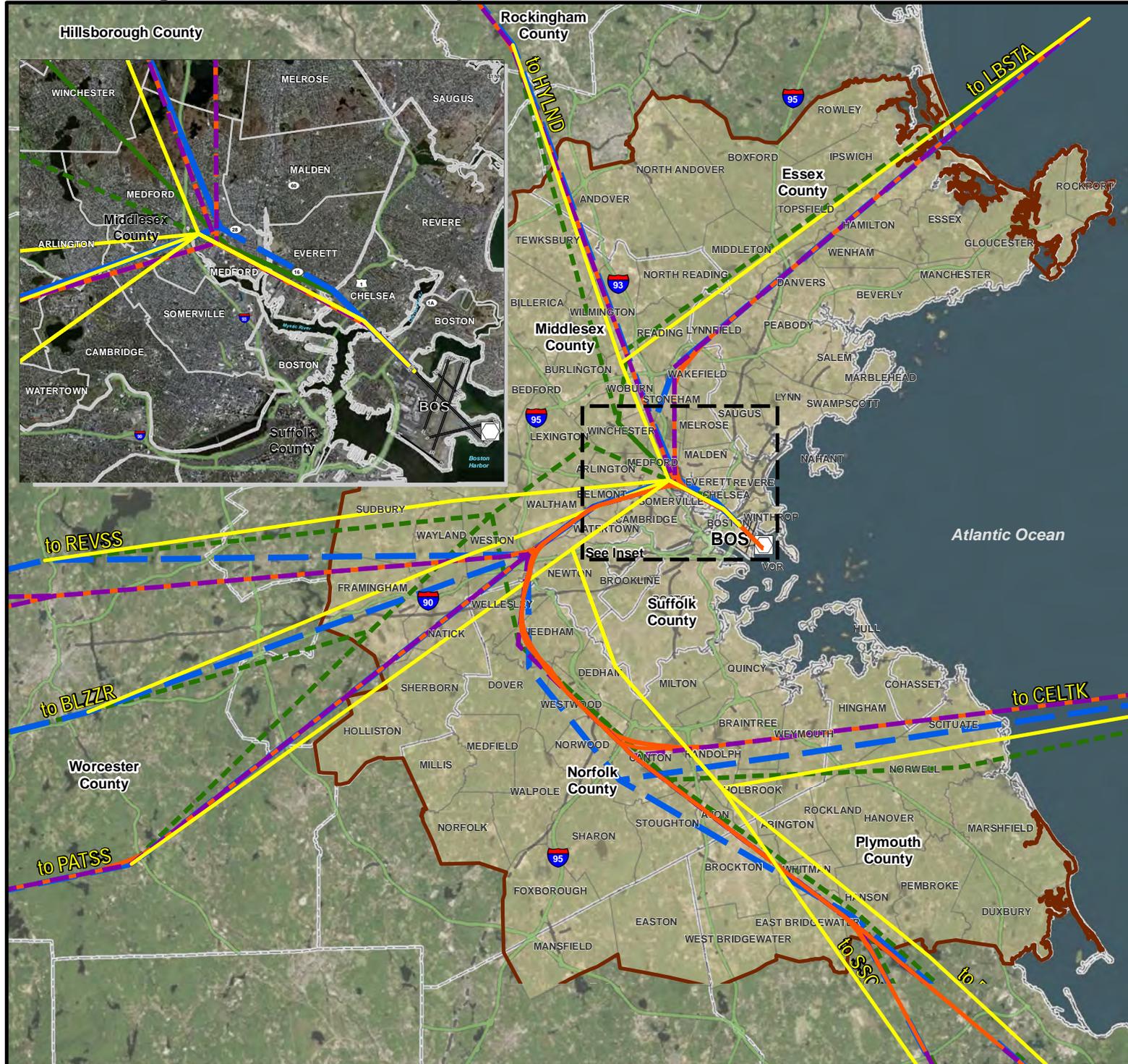


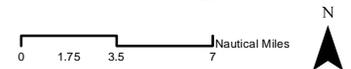
Figure 1-9
Runway 33L RNAV SID
Procedure BLANS
Measure F-HH Comparison

LEGEND

- Measure F-HH(v1)
- - - Measure F-HH(v2)
- - - Measure F-HH(v3)
- - - Measure F-HH(v4)
- Runway 33L RNAV SID Procedure Proposed Action (Procedure Tracks)
- BOS VOR/DME
- Study Area
- Community within Study Area
- County Boundary
- Major Highway
- Major Road



Boston Logan International Airport
Runway 33L RNAV SID
Final EA



Source: RNAV: TARGETS (FAA PBN Integration Office)
 Office of Geographic Information (MassGIS), ESRI

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TRACON Letter of Agreement will be amended to reflect the new procedure. Letters of Agreement typically delegate airspace and responsibilities, specify ATC procedures, and standardize operating methods. It is anticipated that once implemented and published, the Proposed Action (Runway 33L RNAV SID) will be in use as the primary procedure for Boston turbojet departures from that runway. Like the existing RNAV SIDs off Runways 4R, 9, 15R, 22L/R and 27, the Proposed Action would be used to the maximum extent possible unless safety, separation standards or operational requirements dictate otherwise. The LOGAN SIX departure will still be available for aircraft unable to fly the primary procedure, and turboprop aircraft.

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Endnotes

- ¹ Council on Environmental Quality, Executive Office of the President, *Regulations for Implementing the Procedural Provisions of The National Environmental Policy Act*, 40 CFR Parts 1500-1508, November 29, 1978.
(http://ceq.hss.doe.gov/ceq_regulations/Council_on_Environmental_Quality_Regulations.pdf).
- ² Federal Aviation Administration, *Environmental Impacts: Policies and Procedures*, FAA Order 1050.1E, Change One. Chapter 4, §401m, March, 2006.
(http://www.faa.gov/documentLibrary/media/order/energy_orders/1050-1E.pdf).
- ³ Federal Aviation Administration, FAA Order 1050.1E, Change 1 Guidance Memo #2: *Guidance on Preparing Focused, Concise and Timely Environmental Assessments*, January 2011
([http://www.faa.gov/about/office_org/headquarters_offices/apl/environ_policy_guidance/guidance/media/Guidance%20Memorandum%20on%20Preparing%20Focused%20Concise%20and%20Timely%20Environmental%20Assessments%20\(EAs\).pdf](http://www.faa.gov/about/office_org/headquarters_offices/apl/environ_policy_guidance/guidance/media/Guidance%20Memorandum%20on%20Preparing%20Focused%20Concise%20and%20Timely%20Environmental%20Assessments%20(EAs).pdf)) and FAA Order 1050.1E, par 404c
(http://www.faa.gov/documentLibrary/media/order/energy_orders/1050-1E.pdf).
- ⁴ FAA Order JO 7400.2J recommends considering proposed changes between 10,000' and 18,000' AGL when the proposed changes are over a National Park or Wildlife Refuge. No changes are proposed to occur over a National Park or Wildlife Refuge. See
<http://www.faa.gov/documentLibrary/media/Order/AIR.pdf>.
- ⁵ For background and current status on this study refer to www.bostonoverflightnoisestudy.com.
- ⁶ Department of Transportation, Federal Aviation Administration, New England Region, Record of Decision, *Airside Improvements Planning Project, Logan International Airport, Boston, Massachusetts*, August 2, 2002. (http://www.faa.gov/airports/environmental/records_decision/media/rod_boston.pdf).
- ⁷ Although Runway 27 has an RNAV procedure in place (WYLYY ONE), it has been tied into the existing RNAV procedures. This action is separate and independent of the Runway 33L RNAV SID and is categorically excluded from the preparation of an EA or EIS.
- ⁸ Federal Aviation Administration, *Boston Logan Airport Noise Study Final Level 3 Screening Analysis*, December 2012.
(<http://www.bostonoverflightnoisestudy.com/docs/BLANS%20Phase%202%20Level%203%20Screening%20Final%20Report%20121213.pdf>).